

AMENDMENTS TO THE CLAIMS:

1.(currently amended): A layer 2 link handler provided in a network-side device, ~~that and~~ is connected with a user-side device by a permanent virtual connection path, wherein said user-side device is made to connect to one among multiple specified connection destinations via one of a permanent virtual connection path and a switched virtual connection path, the layer 2 link handler comprising:

a path specification means that specifies one path of a connection request destination from layer 2 link information that is emitted from the user-side device at the time of a layer 2 link connection request; and

a path connection means that causes said permanent virtual connection path connected with the user-side device to connect to one path of the connection request destination and form a path between the user-side device and the specified connection destination.

2.(original): The layer 2 link handler as described in claim 1, wherein said path connection means includes a distribution means that, by switching on a layer 2 packet level, distributes and transfers packets that arrive from the permanent virtual connection path connected with the user-side device to one path of the connection request destination.

3.(original): The layer 2 link handler as described in claim 1, wherein said path connection means includes a setting means that newly sets one path of the connection request destination specified by said path specification means and connects a path between the user-side device and the specified connection destination.

4.(original): The layer 2 link handler as described in claim 1, wherein said path connection means includes a labeling means that, based on layer 2 link information emitted from the user-side device at the time of a layer 2 link connection request, assigns a label of each layer 2 link of said connection request to a layer 2 packet from the user-side device, said path connection means further including a transfer means that transfers, by label multiplex layer 2 links, a layer 2 packet labeled by said labeling means to the path to said specified connection destination.

5.(original): The layer 2 link handler as described in claim 1, wherein said path connection means recognizes the labels of layer 2 packets that arrive from the permanent virtual connection path with the user-side device and to which labels are assigned for each layer 2 link, and transfers the layer 2 packets to the path to the specified connection destination that corresponds to a given label, and recognizes the labels of labeled layer 2 packets that arrive from the path with the specified connection destination and transfers the layer 2 packets to the permanent virtual connection path to the user-side device that corresponds to a given label.

6.(original): The layer 2 link handler as described in claim 4, wherein said labeling means includes a selecting means that, when a label is newly assigned to a layer 2 link, selects an arbitrary available label number and emits a labeled layer 2 packet, and said path connection means handles the link of the labeled layer 2 packet that is assigned the same label number and is sent back from the side of the device that received said labeled layer 2 packet, as a link of the pair of said layer 2 link newly assigned a label.

7.(original): The layer 2 link handler as described in claim 6, wherein said labeling means includes an assigning means that newly selects a label number and assigns said label

number including in the label a marking indicating that it is a transmission from the allocated label number management side, and handles the link of the labeled layer 2 packet sent back from a reception side with the same label number, to which is added a marking indicating a transmission from the label number non-management side, as a link of the pair of the layer 2 link newly assigned a label.

8.(original): The layer 2 link handler as described in claim 4, wherein said labeling means, when it newly assigns a label to a layer 2 link, determines the label number by doing a negotiation mutually with another device side.

9.(original): The layer 2 link handler as described in claim 4, wherein said labeling means, when it newly assigns a label to a layer 2 link, assigns a label with a label number directed by operation of a network management operation device.

10.(original): The layer 2 link handler as described in claim 5, wherein said path connection means recognizes the labels of layer 2 packets that arrive from the permanent virtual connection path with the user-side device and to which are assigned labels according to the quality-of-service class of each layer 2 link, and transfers layer 2 packets to the path to the specified connection destination that corresponds to the given label.

11.(original): The layer 2 link handler as described in claim 5, wherein said path connection means recognizes the labels of layer 2 packets that arrive from the permanent virtual connection path with the user-side device and to which are assigned labels according to the connection destination of each layer 2 link, and transfers layer 2 packets to a path to the specified connection destination that corresponds to the given label.

12.(original): The layer 2 link handler as described in claim 5, wherein said path connection means recognizes the labels of layer 2 packets assigned according to the distribution type of service in the IP packet within layer 2 link packets that arrive from the permanent virtual connection path with the user-side device, and transfers layer 2 packets to the path to a specified connection destination that corresponds to the given label.

13.(original): The layer 2 link handler as described in claim 1, wherein said path connection means includes an extracting means that extracts the request connection destination name from layer 2 link information emitted from the user-side device at the time of a layer 2 link connection request and a conversion table that converts from said connection destination name to a connection address, and path determining means that uses a connection address obtained from said conversion table to cause a path to be connected between the user-side device and the specified connection destination.

14.(currently amended): The 2 link handler as described in claim 1, ~~wherein~~ wherein processing that specifies one path of the connection request destination from layer 2 link information in said path specification means is done under software control by a processor, and the path connection means that connects the permanent virtual connection path of the user-side device to said connection destination after one connection destination path is specified, is constituted by a switching means by means of hardware.

15.(currently amended): A layer 2 link path connection method comprising the steps of:
providing a layer 2 link handler connected by a permanent virtual connection path
with ~~[[the]]~~ a user-side device; ~~[[,]]~~

extracting by said link handler a request connection destination name from layer 2 link information emitted from [[a]] the user-side device at the time of a layer 2 link connection request;[[,]]

extracting a connection address from said connection destination name by means of a conversion table;[[, and]]

notifying the user-side device connected by a permanent virtual connection path of said connection address;[[,]]

emitting by the user-side device the connection destination address it has been notified of to the network-side device;[[,]] and

based on said connection destination address, connecting ~~connected~~ by the network-side device, the user-side device and the connection destination by switching [[of]] one of permanent virtual connection paths and switched virtual connection paths.